UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
HUSSAIN, IMAD

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 December 2005</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-31</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-18,21-24,26-31</u> is/are rejected.
7)☒ Claim(s) <u>1,6,9-12,19,20,23-31</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>07 December 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>18 January 2006</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-31 are pending in application 10/559,726.

Priority

2.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

PCT/IB04/02625, filed on 21 July 2004.

Claim Objections

3.   Claim 1 is objected to because of the following informality: "compries" should

read "comprises". Appropriate correction is required.

4.   Claim 6 is objected to because of the following informality: the claim limitation

"said tags" lacks antecedent basis. Appropriate correction is required.

5.   Claims 9-12, 19, 20, 25, 27, 29 and 31 are objected to under 37 CFR 1.75(c) as

being in improper form because a multiple dependent claim cannot depend from any

other multiple dependent claim (claim 7). See MPEP § 608.01(n). Accordingly, the

claims have not been further treated on the merits.

6.   Claims 19 and 23-31 are objected to under 37 CFR 1.75(c), as being of improper

dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s)

in proper dependent form, or rewrite the claim(s) in independent form. The claims are

directed to a device, but the previous claims (1, 2, 7, 10 and 11) are directed to a

document.

7.   A series of singular dependent claims is permissible in which a dependent claim

refers to a preceding claim which, in turn, refers to another preceding claim.

        A claim which depends from a dependent claim should not be separated by any

claim which does not also depend from said dependent claim. It should be kept in mind

that a dependent claim may refer to any preceding independent claim. In general,

applicant's sequence will not be changed. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

8.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

9.   Claims 23-24, and 26 are rejected under 35 U.S.C. 112(1) as single means

claims.

        In this case, a single means claim, i.e., where a means recitation does not

appear in combination with another recited element of means, is subject to an undue

breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-

715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every

conceivable means for achieving the stated purpose was held nonenabling for the

scope of the claim because the specification disclosed at most only those means known

to the inventor.). When claims depend on a recited property, a fact situation comparable

to Hyatt is possible, where the claim covers every conceivable structure (means) for

achieving the stated property (result) while the specification discloses at most only

those known to the inventor (MPEP 2164.08(a)).

10.   Compact prosecution has been hereby applied. Although previous rejection(s)

and/or objections clearly indicate that certain claims have not been treated on the

merits, in accordance with the MPEP, it is essential that patent applicants obtain a

prompt yet complete examination of their applications. Under the principles of compact

prosecution, each claim *should be reviewed for compliance with every statutory*

requirement for patentability in the initial review of the application, even if one or more

claims are found to be deficient with respect to some statutory requirement (see MPEP

§2106 (II)). Hence, the following rejection is found suitable.

Claim Rejections - 35 USC § 101

11.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

12.   Claims 1-18 and 26-31 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

In this case, computer-related inventions whether descriptive or functionally

descriptive material are non-statutory categories when claimed as descriptive material

per se (see Warmerdam, 33 F.3d at 1360 USPQ2d at 1759), falling under the "process"

category (i.e. inventions at that consist of a series of steps or acts to be performed).

See 35 U.S.C. 100(b) ("The term process means, art, or method, and includes a new of

a known process, machine, manufacture, composition of matter or material").

Functional descriptive material: "data structures" representing descriptive material per

se or computer program representing computer listing per se (i.e. software per se) when

embodied in a computer-readable media are still not statutory because they are not

capable of causing functional change in the computer. However, a claimed computer-

readable storage medium encoded with a data structure, computer listing or computer

program, having defined structural and functional interrelationships between the data

structure, computer listing or computer program and the computer software and

hardware component, which permit the data structure's, listing or program's functionality

to be realized, is statutory (see MPEP 2106).

Claims 1-11 are drawn to a *service description document*, which is clearly a data

structure and hence non-statutory subject matter.

Claims 12-18 recite a method that yields neither a transformation of matter nor

produces tangible, concrete, and useful results (merely producing a data structure) and

hence is non-statutory subject matter.

Claims 26-27 are drawn to a *communication network*, which does not fall into any

of the statutory categories listed above.

Claims 28-29 recite a storage means comprising solely *instructions*, which is

clearly software per se and hence non-statutory subject matter.

Claims 30-31 are drawn to a *computer program*, which is clearly software per se

and hence non-statutory subject matter.

Claim Rejections - 35 USC § 102

13.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14.   Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Jean-

Jacques Moreau (US 2003/0028559) hereinafter Moreau).

        Regarding claim 13, Moreau discloses *a method of validating a multimedia*

[Moreau: "image"] *document when a service offered by a server in a communication*

network is implemented, the service being associated with a service description

document [Moreau: Paragraphs 0008 and 0116], *characterized in that it comprises the*

following steps [Moreau: Paragraph 0124]*:*

-    *acquiring the multimedia document;* [Moreau: Figure 2 S30]

-    *extracting a description of abstract constraints associated with a binary*

multimedia document from the description document of a service; [Moreau: Figure 2

S31 and Paragraphs 0016-0017 ("length attribute")]

-    *extracting a content description associated with the multimedia document;*

[Moreau: Figure 2 S32-S33 and Paragraph 0018 ("set of data")] *and*

-    *comparing the content description and the description of abstract constraints*

extracted from the service description document [Moreau: Figure 2 S32-S33 and

Paragraphs 0042 ("processing the set of data in the form as identified") and 0150].

Claim Rejections - 35 USC § 103

15.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

16.   Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Robert Chinnici et al. (*Web Services Description Language (WSDL) V1.2*, hereinafter

Chinnici) in view of Jane Hunter et al. (*An Overview of the MPEG-7 Description*

Definition Language (DDL) Proposals, hereinafter Hunter).

        Regarding claim 1, Chinnici discloses *a description document for a service*

offered by a server in a communication network, comprising

        a first abstract part adapted to describe at least one message exchanged over

the communication network when the service is implemented [Chinnici: Page 5 Section

1 Paragraphs 1-3]*; and*

        a second concrete part adapted to describe the information relating to the

transmission of the messages over the communication network [Chinnici: Page 5

Section 1]*,*

        wherein said first abstract part comprises a description of abstract constraints

associated with a document [Chinnici: Page 32 Section 2.13 Paragraph 2 and Page 36

Section 3.2 Paragraph 1].

Chinnici does not explicitly disclose that the document is a *binary multimedia document*.

However, Hunter discloses a description document format for binary multimedia documents [Hunter: Page 2 ("Multiple media types")].

Chinnici and Hunter are analogous art in the same field of endeavor as both deal with XML schemas for service description and delivery. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to utilize the MPEG-7 scheme of Hunter for multimedia documents in the system of Chinnici. One of ordinary skill in the art would have been motivated to modify the system of Chinnici with the MPEG-7 scheme of Hunter because in doing so, the system would adhere to multimedia XML standards, including support for multiple media types [Hunter: Page 2 ("Multiple media types")].

Regarding claim 2, Chinnici-Hunter discloses that *said description of abstract constraints is represented using the semantics of a description language of a content of a binary multimedia document* [Hunter: Title ("MPEG-7 Description Definition Language"), Page 2 ("Multiple media types") and Page 3 ("Validation of constraints")].

Regarding claim 3, Chinnici-Hunter discloses that *said description of abstract constraints is represented using the semantics defined by the MPEG7 standard* [Hunter: Title ("MPEG-7 Description Definition Language"), Page 2 ("Multiple media types") and Page 3 ("Validation of constraints")].

Regarding claim 4, Chinnici-Hunter discloses that *said description of abstract constraints is represented in a mark-up language of the XML type* [Hunter: Title ("MPEG-7 Description Definition Language"), Page 1 ("XML should be used as the syntax for MPEG-7") and Page 3 ("Validation of constraints")].

Regarding claim 5, Chinnici-Hunter discloses that *said description of abstract constraints* [Hunter: Page 3 ("Validation of constraints")] *is represented in a schema language such as XML-Schema* [Hunter: Page 1 Last Sentence], *tags* [Hunter: Page 17 ("Properties and Attributes")] *being defined using the semantics of the MPEG7 standard* [Hunter: Page 18 Example].

Regarding claim 6, Chinnici-Hunter discloses that *said description of abstract constraints is represented in a description language of a content of the multimedia document* [Hunter: Title ("MPEG-7 Description Definition Language"), Section 2 Page 2 ("Multiple media types") and Section 2 Page 3 ("Validation of constraints")], *tags being adapted to integrate directly or by reference attributes represented in a schema mark-up language such as XML-Schema* [Hunter: Page 17 ("Properties and Attributes are equivalent to XML elements and attributes respectively")].

Regarding claim 7, Chinnici-Hunter discloses that *the description language of a*

content of the multimedia document is defined according to the MPEG7 standard

[Hunter: Title ("MPEG-7 Description Definition Language")].

Regarding claim 8, Chinnici-Hunter discloses that *said description of abstract*

constraints is represented in a schema language [Hunter: Page 1 Last Sentence] *such*

as Schematron adapted to define a set of minimum constraints [Hunter: Page 8

Paragraph 3 and sub-bullets].

9.   Claims 14-18, 21-24, 26, 28 and 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Moreau in view of Hunter.

Regarding claim 14, Moreau does not disclose that *said description of abstract*

constraints is represented in a language describing a content of a multimedia document.

However, Hunter discloses that *said description of abstract constraints is*

represented in a language describing a content of a multimedia document [Hunter: Title

("MPEG-7 Description Definition Language"), Page 2 ("Multiple media types") and Page

3 ("Validation of constraints")].

Moreau and Hunter are analogous art in the same field of endeavor as

both deal with XML schemas for representing multimedia data. It would have been

obvious to a person having ordinary skill in the art at the time the invention was made to

utilize the MPEG-7 scheme of Hunter for multimedia documents in the system of

Moreau. One of ordinary skill in the art would have been motivated to modify the

system of Moreau with the MPEG-7 scheme of Hunter because in doing so, the system

would adhere to multimedia XML standards, including support for multiple media types

[Hunter: Page 2 ("Multiple media types")].

Regarding claim 15, Moreau-Hunter discloses that *the language describing a*

content of the multimedia document is defined under the MPEG7 standard [Hunter: Title

("MPEG-7 Description Definition Language")].

Regarding claim 16, Moreau-Hunter discloses that, *at the said extraction step*

[Moreau: Figure 2 S32-S33 and Paragraph 0018 ("set of data")], *an MPEG7 description*

[Hunter: Title ("MPEG-7 Description Definition Language")] *of the multimedia document*

inserted in the multimedia document is extracted.

Regarding claim 17, Moreau-Hunter discloses that the validation method can be

implemented during a step of selecting a multimedia document to be inserted in

message exchanged during the implementation of a service offered by a server in the

communication network [Moreau: Paragraph 149 ("the identification... can be performed

at any hierarchical level of the XML document")].

Regarding claim 18, Moreau-Hunter discloses that the validation method can be

implemented during a step of validating a request received by a server in a

communication network for implementing a service described in a service description

document [Moreau: Paragraph 149 ("the identification... can be performed at any

hierarchical level of the XML document")].

Regarding claim 21, Moreau-Hunter discloses *a device for validating a*

multimedia document during the implementation of a service offered by a server in a

communication network [Moreau: Paragraph 0008], *the service being associated with a*

service description document [Moreau: Paragraph 0009], *characterized in that it*

comprises:

   - *means for acquiring the multimedia document* [Moreau: Figure 5 (1, 110)];

   - *means for extracting a description of abstract constraints associated with the*

binary multimedia document from the description document of a service [Moreau: Figure

5 (100)];

   - *means for extracting a content description associated with the multimedia*

document [Moreau: Figure 5 (100)]; *and*

   - *means for comparing the content description and the description of abstract*

constraints extracted from the service description document [Moreau: Figure 5 (100,

102)].

Regarding claim 22, Moreau-Hunter discloses that the device is incorporated in:

   - *a microprocessor* [Moreau: Figure 5 (100)];

   - *a read only memory adapted to store a program validating a multimedia*

document [Moreau: Figure 5 (101)]; *and*

- *a random access memory comprising registers adapted to store variables modified during the running of the program* [Moreau: Figure 5 (102)].

Regarding claim 23, Moreau-Hunter discloses *a server computer in a communication network* [Moreau: Paragraph 0008], *characterized in that it comprises means adapted to implement the validation method according to one of Claims 13 to 14* [Moreau: Figure 5].

Regarding claim 24, Moreau-Hunter discloses *a client computer in a communication network* [Moreau: Paragraph 0008], *characterized in that it comprises means adapted to implement the validation method according to one of Claims 13 to 14* [Moreau: Figure 5].

Regarding claim 26, Moreau-Hunter discloses *a communication network* [Moreau: Paragraph 0008], *characterized in that it comprises means adapted to implement the validation method according to one of Claims 13 to 14* [Moreau: Figure 5].

Regarding claims 28 and 30, the claims comprise substantially the same limitations as claims 13 and 14. The same rationale for rejection is applicable.

Cited Pertinent prior art

10. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

   a. Stephan H. Maes. US 2002/0184373. (Describes a system for multimedia

transport using standardized data types and WSDL.)

   b. Herve Ruellan et al. US 2003/0050942. (Provides a description of XML

validation.)

   c. Hawley K. Rising III et al. US 2002/0120652. (Describes a system of using

an XML DDL with multimedia content to create a multimedia document.)

   d. E. Terzi et al. *The MPEG-7 Multimedia Content Description Standard and

the XML Schema Language.* (Describes a web services environment using

MPEG-7 and XML Schema.)

   e. Jane Hunter et al. *A Proposal for an MPEG-7 Description Definition

Language (DDL).* (Describes MPEG-7.)

   f. HP. *RDFParser.java* (Source code for a computer program to validate a

multimedia XML-based RDF document.)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Imad Hussain whose telephone number is 571-270-3628. The examiner can normally be reached on Monday through Thursday from 0730 to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beatriz Prieto can be reached on 571-272-3902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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